**Biology 230**

**Biology of Animals**

**Fall 2016**

**Instructor**

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| **Dr. Robert F. Mitchell** |
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**Office hours**

Mon/Fri 3:00-4:00PM, Weds 1:00-1:50PM, or by appointment.

**Course Description**

Biology 230 is an introduction to the diversity found within the animal world. It is a primary component of the Biology major but is open to all students who are interested in exploring the natural world.

**Course Objectives**

Students will be introduced to the diversity of animal life, the phylogenetic relationships between animal groups, and the structural features that enable animals to inhabit various habitats. Students will be expected to recall taxonomic rankings presented in lecture, be able to summarize the unifying features of animal groups, and describe anatomic and physiologic processes that enable life in different environments.

**Communication**

You will be expected to check your uwosh.edu email and D2L regularly. Communication outside of class and office hours will be via email, and additional information such as lectures and handouts will be posted on the D2L course website.

**lecture information**

***Lecture Schedule*:** 1:50-2:50 PM, MWF in Halsey Science 260.

***Lecture Text:*** Miller and Harley, Zoology, Tenth Edition, McGraw-Hill.

***Lecture Format:*** Lectures will be presented via Powerpoint. The lectures will be available on D2L the night before each class period, and are specifically designed to help you in note-taking. I strongly suggest you print the lectures and bring them to class.

***Lecture Assignments***: We will have three lecture exams and one review quiz on the scheduled dates (please see the lecture/lab schedule). The four exams together will be worth 300 points and consist of mixed multiple choice, matching, short answer, and essay questions. The lecture grade will also include small assignments such as short writing activities, worksheets, or quizzes (30 pts total).

***Cell Phones***: All cell phones must be turned off or silenced and may not be used during lecture and laboratory time. If you are expecting an emergency call (i.e. relative on deathbed, wife in labor), you may leave the phone on, but let me know before the lecture.

***Other electronic devices***: iPods, iPhones, and other music players may not be listened to during lectures and especially during exams, so turn them off and take the earbuds out. Laptops and tablets should be used only for taking notes and not for browsing the internet. At the very least, be sneaky about it - I will not be pleased if I catch you posting to Facebook or Twitter, even if it is complimentary of my lecture.

**Laboratory Information**

***Laboratory Schedule*:** 9:40-12:40 or 1:20-4:20, Tuesdays, in Halsey Science 30.

***Laboratory Text***: Laboratory Studies in Animal Diversity, Hickman et al. Seventh Edition.

***Laboratory Assignments*:** We will have three lab practical exams (50 pts each), pre-laboratory quizzes (60 pts total), and laboratory assignments (60 pts total). Lab practicals will include written questions and will also test your ability to identify prepared specimens and structures we have viewed in lab. The pre-labs will consist of a few questions about the laboratory material and protocol, due immediately before each laboratory section. Laboratory assignments will include drawings of structures observed during the laboratory period.

**Grading**

***Course grade****:* Your total grade in the course will be based on: a review quiz worth 25 points and three exams worth 75, 100, and 100 points (300 points); lecture assignments (30 pts); three lab practicals worth 50 points each (150 pts); prelabs (60 pts); and laboratory assignments (60 points). Total points possible will be 600, and your final grade will be calculated by dividing your total points earned by 600.

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| **Evaluation** | **Percentage** | **Points** |
| Lecture Exams / Review Quiz | 50% | 300 |
| Lecture Assignments | 5% | 30 |
| Lab Practicals | 25% | 150 |
| Pre-labs | 10% | 60 |
| Lab Assignments | 10% | 60 |
| **TOTAL** | **100%** | **600** |

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| **Percentage Score** | **Letter Grade** | **Point Range** |
| 93-100% | A | 558-600 |
| 90-92% | A- | 540-557 |
| 87-89% | B+ | 522-556 |
| 83-86% | B | 498-521 |
| 80-82% | B- | 480-497 |
| 77-79% | C+ | 462-479 |
| 73-76% | C | 438-461 |
| 70-72% | C- | 420-437 |
| 67-69% | D+ | 402-419 |
| 63-66% | D | 378-401 |
| 60-62% | D- | 360-377 |
| < 60% | F | <360 |

***Accessing Grades and Class Information****:* Grades will be posted on D2L. If you have any questions or problems using the site, please see me.

***Extra Credit***: Specific extra credit assignments will not be offered. However, extra credit questions may accompany graded assignments such as tests or practicals. Extra credit will not increase a score beyond the total possible point value of each evaluation category. For instance, the three lab practicals are each worth 50 points, for a total of 150 points. Thus, if a student receives grades of 45, 50, and 55, the total point value may add to 150. However, if a student receives grades of 50, 50, and 55, the total point value is capped at 150.

**Policies**

***Attendance*:**  You are expected to arrive to class on time (see "Make-up Policy” below) and to actively participate in the classroom. If you miss all or a portion of a class, then **you are solely responsible for obtaining missed class material from fellow students**. Activities and assignments may occur in any class period, and thus points may be lost during a missed class period.

***Make-ups*:**  Absences may be excused in some circumstances, such as military service, court, jury duty, religious holiday, personal emergency, or illness, but you will be asked to provide documentation. You must make arrangements in advance to make up an expected absence. If you miss class due to an emergency or illness, you must contact me as soon as possible, preferably by the next class meeting. Lecture and lab assignments may be made up in case of emergency or illness, but no formal make-up labs will be provided (thus, it may not be possible to make up work that is directly related to lab activities). If you miss an exam due to emergency, illness, or other excused absence, you must take the exam before the end of the day in most cases. Make-up exams will not be allowed after the exam has been graded and returned. Excused make-up lab practicals will not be possible after the practical materials have been cleared, which is usually by the end of the same day.

***Statement on Academic Dishonesty*:** Students are referred to the University of Wisconsin Oshkosh Student Discipline Code as detailed in specific provisions of Chapter 14 of the State of Wisconsin Administrative Code. Any student(s) found in violation of any aspect of the above Code (as defined in sections UWS 14.02 and 14.03) will receive a sanction as detailed in UWS 14.05 and 14.06. Examples of violations include: looking at another student’s exam or answer sheet and copying the answers during an exam, talking or whispering to another student during an exam, receiving text messages during an exam on an electronic device, or listening to answers or information recorded on an electronic device via earphones during an exam. Note that work submitted for this course must not have been submitted previously in another course. Sanctions range from an oral reprimand to a grade of zero for the assignment in question to expulsion from the University of Wisconsin Oshkosh. Students have the right to request a hearing and to appeal sanctions (as defined in UWS 14.08-14.10).

***Grade Rebuttals***: If you disagree with your grade, I highly encourage you to address your grievances, either by a written note turned in to me during class, or by email. Be specific and attach your assignment and any other documentation required (e.g., “point total is incorrect because 1+1 = 2, not 3, please see attached assignment”; or, “I believe that my answer is correct because on slide X of lecture Y, it says [this], please see attached assignment”). The deadline for rebuttals is one class period after assignments or tests have been returned.

***Disabilities***: Students who have physical or learning disabilities and wish to request academic adjustments should notify the Disabilities Office so that appropriate accommodations can be made. For more information contact the Counseling Center or Disabilities Services at (920)-424-2404.

# Lecture and Laboratory Schedule: Biology 230

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| **Lecture** | **Date** | **Lecture Topic** | **Text** | **Lab Topic (Tuesdays)** |
| 1 | Jan. 30 | Introduction, Syllabus, Phylogeny | Ch. 1, Ch. 7 | Microscopy and Phylogeny |
| 2 | Feb. 1 | “Protists” and Cell Structure | Ch. 2, Ch. 8 |  |
| 3 | Feb. 3 | Protozoa | Ch. 8 |  |
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| 4 | Feb. 6 | Tissues and Organization | Ch. 2, Ch. 7 | Protozoa |
| 5 | Feb. 8 | The Earliest Animals | Ch. 9 |  |
| \* | Feb. 10 | **REVIEW QUIZ (Lectures 1-4)** |  |  |
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| 6 | Feb. 13 | Phylum Porifera | Ch. 9 | Porifera and Cnidaria |
| 7 | Feb. 15 | Phyla Cnidaria and Ctenophora | Ch. 9 |  |
| 8 | Feb. 17 | Phylum Platyhelminthes | Ch. 10 |  |
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| 9 | Feb. 20 | Phylum Platyhelminthes | Ch. 10 | Platyhelminthes |
| 10 | Feb. 22 | Other “Acoelomate” Phyla | Ch. 10 |  |
| 11 | Feb. 24 | Phylum Nematoda | Ch. 10 |  |
|  | | | | |
| 12 | Feb. 27 | Other “Pseudocoelomate” Phyla | Ch. 10, 13 | **LAB PRACTICAL 1** |
| 13 | Mar. 1 | Animal Symbiosis | N/A |  |
| \* | Mar. 3 | Exam Review |  |  |
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| \* | Mar. 6 | **EXAM 1 (Lectures 5-13)** |  | Pseudocoelomates |
| 14 | Mar. 8 | Phylum Mollusca | Ch. 11 |  |
| 15 | Mar. 10 | Phylum Mollusca | Ch. 11 |  |
|  | | | | |
| 16 | Mar. 13 | Phylum Mollusca | Ch. 11 | Mollusca |
| 17 | Mar. 15 | Phylum Annelida | Ch. 12 |  |
| 18 | Mar. 17 | Phylum Annelida | Ch. 12 |  |
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|  | Mar. 21 | **Spring Break – NO CLASS** |  |  |
|  | Mar. 23 | **Spring Break – NO CLASS** |  |  |
|  | Mar. 25 | **Spring Break – NO CLASS** |  |  |
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| 19 | Mar. 27 | Phylum Arthropoda: Basal Groups | Ch. 14, 15 | Annelida |
| 20 | Mar. 29 | Phylum Arthropoda: Myriapods | Ch. 14 |  |
| 21 | Mar. 31 | Phylum Arthropoda: Chelicerates | Ch. 14 |  |
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| 22 | Apr. 3 | Phylum Arthropoda: Crustaceans | Ch. 15 | **LAB PRACTICAL 2** |
| 23 | Apr. 5 | Phylum Arthropoda: Insects | Ch. 15 |  |
| 24 | Apr. 7 | Phylum Arthropoda: Insects | Ch. 15 |  |
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| \* | Apr. 10 | Exam Review |  | Arthropoda |
| \* | Apr. 12 | **EXAM 2 (Lectures 14-24)** |  |  |
| 25 | Apr. 14 | Phylum Echinodermata | Ch. 16 |  |
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| 26 | Apr. 17 | Phylum Chordata: Basal Groups | Ch. 17 | Echinodermata |
| 27 | Apr. 19 | Phylum Chordata: Fishes | Ch. 18 |  |
| 28 | Apr. 21 | Phylum Chordata: Fishes | Ch. 18 |  |
|  | | | | |
| 29 | Apr. 24 | Phylum Chordata: Amphibians | Ch. 19 | Chordata |
| 30 | Apr. 26 | Phylum Chordata: Reptiles | Ch. 20 |  |
| 31 | Apr. 28 | Phylum Chordata: Birds | Ch. 21 |  |
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| 32 | May 1 | Phylum Chordata: Birds | Ch. 21 | **LAB PRACTICAL 3** |
| 33 | May 3 | Phylum Chordata: Mammals | Ch. 22 |  |
| 34 | May 5 | Phylum Chordata: Mammals | Ch. 22 |  |
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| 35 | May 8 | Phylum Chordata: Primates | Ch. 22 | **NO LAB** |
| \* | May 10 | Exam Review | Ch. 22 |  |
| \* | May 12 | **EXAM 3 (Lectures 25-35)** | Ch. 22 |  |